

AMENDMENTS TO THE CLAIMS

CLAIM 1 (CURRENTLY AMENDED): A bicycle disk brake rotor apparatus comprising:  
a hub mounting member;

a generally circular first rotor member with a first fixing component structured to mount the first rotor member to ~~[[a]]~~ the hub mounting member;

a generally circular first second rotor member with a first fixing component structured to mount the first second rotor member to the hub mounting member;

~~wherein the first rotor member is attached to a side of the first second rotor member;~~

a fastener that fastens the hub mounting member to the first fixing component on the first rotor member and to the first fixing component on the first second rotor member so that the first rotor member and the first second rotor member are sandwiched between the fastener and the hub mounting member and so that the first rotor member and the first second rotor member are pressed towards each other by the fastener and the hub mounting member to prevent delamination of the first rotor member and the first second rotor member from each other;

wherein at least a majority of the disk brake rotor apparatus between outermost lateral side surfaces thereof is substantially free of voids;

wherein the first second rotor member is formed of a material having greater braking wear resistance than the first rotor member; and

wherein the first second rotor member is pressure welded to the first rotor member.

CLAIM 2 (CURRENTLY AMENDED): The apparatus according to claim 1 further comprising:

a generally circular second second rotor member with a second fixing component structured to mount the second second rotor member to the hub mounting member;

wherein the fastener fastens the hub mounting member to the first fixing component on the first rotor member, to the first fixing component on the first second rotor member and to the second fixing component on the second second rotor member so that the first rotor member, the first second rotor member and the second second rotor member are sandwiched between the fastener and the hub mounting member and so that the first second rotor member and the second second rotor member are

pressed towards the first rotor member by the fastener and the hub mounting member to prevent delamination of the first rotor member, the first second rotor member and the second second rotor member from each other;

wherein the second second rotor member is formed of a material having greater braking wear resistance than the first rotor member; and

wherein the first rotor member is pressure welded to and is disposed between the first second rotor member and the second second rotor member.

CLAIM 3 (ORIGINAL): The apparatus according to claim 2 wherein the first rotor member has greater thermal conductivity than the first second rotor member and the second second rotor member.

CLAIM 4 (ORIGINAL): The apparatus according to claim 2 wherein the first rotor member comprises aluminum, and wherein the first second rotor member and the second second rotor member each comprises stainless steel.

CLAIM 5 (ORIGINAL): The apparatus according to claim 4 wherein each of the first second rotor member and the second second rotor member is formed with a hardening process.

CLAIM 6 (CANCELED).

CLAIM 7 (PREVIOUSLY PRESENTED): The apparatus according to claim 1 wherein the first second rotor member and the second second rotor member are hot rolled to the first rotor member.

CLAIM 8 (PREVIOUSLY PRESENTED): The apparatus according to claim 1 wherein the first second rotor member and the second second rotor member are forge welded to the first rotor member.

CLAIM 9 (ORIGINAL): The apparatus according to claim 2 wherein the first rotor member has a thickness of from approximately 0.5 millimeters to approximately 1.5 millimeters, and wherein the first second rotor member and the second second rotor member each has a thickness of from approximately 0.2 millimeters to approximately 0.8 millimeters.

CLAIM 10 (PREVIOUSLY PRESENTED): The apparatus according to claim 2 further comprising:

- a plurality of the first fixing components;
- a plurality of the first fixing components on the first second rotor member;
- a plurality of the second fixing components on the second second rotor member;
- wherein each of the plurality of first fixing components on the first rotor member aligns with a corresponding one of the plurality of first fixing components on the first second rotor member; and
- wherein each of the plurality of first fixing components on the first rotor member aligns with a corresponding one of the plurality of second fixing components on the second second rotor member.

CLAIM 11 (PREVIOUSLY PRESENTED): The apparatus according to claim 10 wherein the plurality of first fixing components on the first rotor member, the plurality of first fixing components on the first second rotor member, and the plurality of second fixing components on the second second rotor member are circumferentially disposed.

CLAIM 12 (CURRENTLY AMENDED): ~~A bicycle disk brake rotor apparatus comprising:~~

- ~~a generally circular first rotor member with a plurality of circumferentially disposed first fixing components structured to mount the first rotor member to a hub mounting member;~~
- ~~a generally circular first second rotor member with a plurality of circumferentially disposed first fixing components structured to mount the first second rotor member to the hub mounting member;~~
- ~~a generally circular second second rotor member with a plurality of circumferentially disposed second fixing components structured to mount the second second rotor member to the hub mounting member;~~
- ~~wherein the first rotor member is nonremovably bonded to and is disposed between the first second rotor member and the second second rotor member;~~
- ~~wherein each of the plurality of first fixing components on the first rotor member aligns with a corresponding one of the plurality of first fixing components on the first second rotor member;~~

~~wherein each of the plurality of first fixing components on the first rotor member aligns with a corresponding one of the plurality of second fixing components on the second second rotor member;~~

~~wherein at least a majority of the disk brake rotor apparatus between outermost lateral side surfaces thereof is substantially free of voids;~~

~~wherein the first second rotor member is formed of a material having greater braking wear resistance than the first rotor member;~~

~~wherein the second second rotor member is formed of a material having greater braking wear resistance than the first rotor member;~~

The apparatus according to claim 11 wherein the first rotor member, the first second rotor member and the second second rotor member each comprises a ring-shaped member[[:]], and wherein the plurality of first fixing components on the first rotor member, the plurality of first fixing components on the first second rotor member, and the plurality of second fixing components on the second second rotor member extend radially inwardly from their respective inner peripheral surfaces; and

~~wherein an innermost peripheral surface of the apparatus undulates.~~

CLAIM 13 (PREVIOUSLY PRESENTED): The apparatus according to claim 12 wherein each of the plurality of first fixing components on the first rotor member, each of the plurality of first fixing components on the first second rotor member, and each of the plurality of second fixing components on the second second rotor member is structured to receive a fastener therethrough.

CLAIM 14 (PREVIOUSLY PRESENTED): The apparatus according to claim 13 further comprising the fastener for each of the plurality of first fixing components on the first rotor member, the plurality of first fixing components on the first second rotor member, and the plurality of second fixing components on the second second rotor member, wherein at least one fastener comprises aluminum.

CLAIM 15 (CANCELED).

CLAIM 16 (CURRENTLY AMENDED): The apparatus according to claim ~~15~~ 2 wherein the hub mounting member comprises:

a centrally disposed hub attachment component structured to be mounted to the hub; and  
a rotor attachment component extending radially outwardly from the hub attachment component and structured to mount to the first fixing component on the first rotor member, to the first fixing component on the first second rotor member and to the second fixing component on the second second rotor member.

CLAIM 17 (ORIGINAL): The apparatus according to claim 16 wherein the hub mounting member has greater thermal conductivity than the first second rotor member and the second second rotor member.

CLAIM 18 (PREVIOUSLY PRESENTED): The apparatus according to claim 17 further comprising:

a plurality of the first fixing components extending circumferentially around the first rotor member;  
a plurality of the first fixing components extending circumferentially around the first second rotor member; and  
a plurality of the second fixing components extending circumferentially around the second second rotor member;  
wherein each of the plurality of first fixing components on the first rotor member aligns with corresponding ones of the plurality of first fixing components on the first second rotor member and the plurality of second fixing components on the second second rotor member.

CLAIM 19 (PREVIOUSLY PRESENTED): The apparatus according to claim 18 wherein the first rotor member, the first second rotor member and the second second rotor member each comprises a ring-shaped member, and wherein the plurality of first fixing components on the first rotor member, the plurality of first fixing components on the first second rotor member, and the plurality of second fixing components on the second second rotor member extend radially inwardly from an inner peripheral surface of their respective first rotor member, first second rotor member and second second rotor member.

CLAIM 20 (PREVIOUSLY PRESENTED): The apparatus according to claim 19 wherein the rotor attachment component comprises a plurality of arm components extending radially outwardly from the hub attachment component, wherein each arm component is fixed to a corresponding first fixing component on the first rotor member, first fixing component on the first second rotor member and second fixing component on the second second rotor member.

CLAIM 21 (PREVIOUSLY PRESENTED): The apparatus according to claim 20 further comprising a fastener extending through each associated arm component, first fixing component on the first rotor member, first fixing component on the first second rotor member and second fixing component on the second second rotor member.

CLAIM 22 (CANCELED).